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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte WILLIAM J. BALLONI,
JOSEF P. DEBBINS, KRISTINE L. GOULD,
ROBERT H. HAWORTH, and
THOMAS S. HLABAN

Appeal 2008-003090
Application 09/745,320[1]
Technology Center 2400

Decided:[2] June 29, 2009

Before ALLEN R. MacDONALD, *Vice Chief Administrative Patent Judge*, and LEE E. BARRETT and STEPHEN C. SIU, *Administrative Patent Judges*.

BARRETT, *Administrative Patent Judge*.

DECISION ON APPEAL

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[1] Filed December 21, 2000, titled "Method and Apparatus for Remote or Collaborative Control of an Imaging System."

[2] The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

This is a decision on appeal under 35 U.S.C. § 134(a) from the final rejection of claims 1-76. We have jurisdiction pursuant to 35 U.S.C. § 6(b).

We affirm.

STATEMENT OF THE CASE

The invention

The invention relates to remote or collaborative control of an imaging system. In the prior art, the person operating the imaging system may not be the person interpreting the acquired image and the person doing the interpreting may be remotely located with respect to the imaging system. The person reviewing the images may desire alternative images and may also desire to directly operate the imaging system (to specify one or more parameters) and may further desire to monitor the operator of the imaging system during image acquisition to aid or determine the quality of the acquisition parameters. *See* Spec. 1-2.

The invention provides an alternate user interface at a location where the remote or collaborative control of the imaging system will occur, e.g., at interface 24 at workstation 20 shown in Figure 2. The alternate user interface is generated by an application model included in or proximate to the imaging system. The "[a]pplication model 72 translates user interface commands into actions and calculations, and also receives results of a given scan or scanning session for presentation" (Spec. 9, ll. 1-3). The apparatus includes means for updating all of the interfaces in response to a command from one of the interfaces.

The claims

Claim 1 is reproduced below:

> 1. A method for remote or collaborative control of an imaging system, the imaging system associated with an application model located at a first location and the application model being in communication with the imaging system, the method comprising:
>
> providing a first user interface at the first location;
>
> providing a second user interface at a second location, in response to a request for remote or collaborative control of the imaging system at the second location; and
>
> controlling the application model using the first user interface and the second user interface at about a same time.

The reference

Wood	US 5,715,823	Feb. 10, 1998

The rejections[3]

Claims 1-4, 7, 8, 10, 11, 17, 18, 21, 23, 24, 26, 27, 46, 47, 52, 53, 62, 66, 71, and 73 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Wood.

Claims 9, 12-16, 25, 28-30, 31-45, 48-51, 54-61, 63-65, 67-70, 72, and 74-76 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Wood. As noted by Appellants, although not specifically called out, it appears that claims 5, 6, 19, 20, and 22 are also rejected under § 103(a) over Wood in sections 13 and 14 of the Final Office Action date April 6, 2005.

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[3] The rejection of claims 1, 17, 29, 64, 66, and 74 under 35 U.S.C. § 112 ¶ 2 has been withdrawn (Sub. Ans. 2-3).

We note that claims 10, 23, 26, and 52 are rejected under § 102, whereas claims 9, 22, 25, and 50 from which they depend, respectively, are rejected under § 103. Since a dependent claim includes all of the limitations of the claim from which it depends, we assume that claims 10, 23, 25, and 52 are rejected under § 103(a).

Appellants filed an Appeal Brief ("Br.") on December 5, 2005, and a Reply Brief ("Reply Br.") on April 26, 2006. The appeal administrator of the Board entered an Order Returning Undocketed Appeal to Examiner on July 28, 2006, stating that the Appeal Brief was defective, and the Examiner issued a Notification of Non-Compliant Appeal Brief on August 21, 2006. Appellants filed a Reply Brief on September 21, 2006 ("2d Reply Br.").

Another panel of the Board entered an Order Remanding to the Examiner on July 3, 2007, noting that the rejection under 35 U.S.C. § 112 was stated to be withdrawn but still appeared in the statement of the rejection. In response, the Examiner entered a substitute Examiner's Answer on August 10, 2007 ("Sub. Ans."). We refer to the substitute Answer for simplicity since it appears to be identical in content to the original Answer except that it omits the § 112 rejection and has changed paragraph numbers.

Claim groupings

Appellants group the claims as follows (in different order):

Group 1 - claims 1-30 and 59-65
Group 2 - claims 46-58
Group 3 - claims 31-45
Group 4 - claims 5, 6, 33, 44, 59
Group 5 - claims 12-14, 27, 28, 39, 40, 50-52
Group 6 - claims 66-76

Because some groups overlap, we regroup the claims as follows:

Group 1 - claims 1-4, 7-11, 15-26, 29, 30, and 60-65
Group 2 - claims 46-49 and 53-58
Group 3 - claims 31, 32, 34-38, 41-43, and 45
Group 4 - claims 5, 6, 33, 44, and 59
Group 5 - claims 12-14, 27, 28, 39, 40, and 50-52
Group 6 - claims 66-76 (claims 67 and 69 are separately argued)

FACTS

Wood describes an ultrasonic diagnostic imaging system which can be accessed or controlled from a remote location.

The system shown in Figure 1 comprises an ultrasonic diagnostic imaging system 10 which is designed to be accessed by an Internet browser on a remote personal computer 100. The ultrasound system includes conventional components including a scanhead 12, which transmits and receives ultrasonic waves, under control of a control panel 20 which enables a user to prepare and store diagnostic reports of the exams performed in medium 24 (col. 3, ll. 10-17). The ultrasound system includes an HTTP server 30 which is connected to access images and reports from the storage

medium 24 and make them available to a personal computer, terminal, or workstation at a remote location (col. 3, ll. 18-29).

The HTTP server 30 responds to external requests by displaying Web pages of information and hypertext connections to additional Web pages and information such as ultrasound images and reports (col. 7, ll. 37-44). "The HTTP server also responds to external requests to perform a specific action associated with a button or control on the ultrasound system . . . ." Col. 7, ll. 44-46. In response to external requests, the HTTP server 30 transmits HTML page 34 to an inquiring Web browser (col. 8, ll. 10-12).

Small programs called Common Gateway Interface (CGI) programs, shown at 36 in Figure 2, provide an interface between HTML pages and the hardware and software of the ultrasound system (col. 8, ll. 40-44). "The CGI programs communicate with the ultrasound system, asking the system to perform actions or provide requested information such as images, reports, or current status. In a constructed embodiment the CGI programs respond to external requests for information by dynamically creating custom HTML pages in which the requested information is embedded." Col. 8, ll. 44-51.

Remote operation is described in connection with Figures 4 and 10. On the ultrasound systems homepage in Figure 4, a remote user can click on the button "System Operation Control" to execute a CGI program called "syscontrol" (col. 11, ll. 25-29). The syscontrol program creates a Web page in which is embedded the ultrasound image most recently produced by the ultrasound system as shown in the center of Figure 10 (col. 11, 29-32). To the right and below the ultrasound image are displayed user controls of the

ultrasound system. "Clicking on these buttons causes the syscontrol CGI program to command the ultrasound system controller 18 to change the operation of the ultrasound system in accordance with the function of the selected control." Col. 11, ll. 35-39. The Update key causes the HTTP server and CGI programs of the ultrasound system to update the remotely displayed image with the ultrasound image produced most recently by the ultrasound system (col. 11, ll. 43-49).

Wood describes that "[t]hese capabilities mean that a physician can perform an ultrasound exam from distances of thousands of miles from the patient, needing only a pair of hands at the patient's location to hold and manipulate the ultrasound probe" (col. 11, ll. 50-53).

Wood states that "[d]ifficult diagnostic cases can be directed to the most appropriate specialist for that case type on a moment's notice" (col. 12, ll. 3-5).

Wood describes that the system is based on a personal computer architecture with a multi-tasking operating system:

> The multi-tasking operating system enables the central processor of the ultrasound system to carry out normal ultrasonic imaging tasks and network communications tasks in a time interleaved manner. To the operator at the system and the interrogator at the remote terminal, their separate functions appear to each of them to be executed in real time, without conflict with the activities of the other. This means, for instance, that a physician can monitor the progress of an ultrasonographer operating the ultrasound system, retrieving images for diagnosis and patient reports from the ultrasound system for one patient while the ultrasonographer is in the process of conducting a diagnostic examination of another patient.

Col. 12, ll. 16-29.

DISCUSSION

Group 1 - claims 1-4, 7-11, 15-26, 29, 30, and 60-65

Issue

Does Wood teach "controlling the application model using the first user interface and the second user interface at about a same time" as recited in claim 1, and "wherein the apparatus is configured such that the application model can be controlled using the first user interface and the second user interface at about a same time" as recited in claim 17?

Contentions

Appellants' 2d Reply Brief quotes the Specification, page 7, line 3, to page 9, line 9 as examples of support for the limitation "controlling the application model using the first user interface and the second user interface at about a same time" in claim 1 (2d Reply Br. 9-11).

Appellants argue that Wood does not teach the limitation at issue because Wood teaches (col. 11, ll. 25-49) that when a remote user interface is used, the system is controlled only by the remote user interface (Br. 11).

Appellants note that Wood describes that "a physician can perform an ultrasound exam from distances of thousands of miles from the patient, needing only a pair of hands at the patient's location to hold and manipulate the ultrasound probe" (col. 11, ll. 50-53). "In other words, Wood suggests that the purpose of the person in the vicinity of the ultrasound system is to control the probe and not to control the system parameters. Thus, Wood

would not suggest that an application model be controlled using both local controls and its remote user interface." Br. 12.

The Examiner interprets the limitation at issue to correspond to the description of a scanner operator at a main operator console (first user interface at the first location) and a physician at a remote location (second user interface at a second location) at Spec. 11, ll. 17-27 (Sub. Ans. 9).

The Examiner finds that Wood teaches (at col. 12, ll. 20-39) an operator and a remote physician collaborating with one another to control the imaging system because their requested operations are interleaved together (Sub. Ans. 9). The Examiner finds that "at about the same time" means continuous monitoring and updating commands and results as rapidly as possible, and because Wood discloses providing physicians and operators updates in real time, "Wood discloses that the interfaces may control the application in 'at about the same time'" (Sub. Ans. 10).

Appellants argue that the Examiner makes a new argument that "Wood discloses that the interfaces may control the application in 'at about the same time'" which is procedurally inappropriate under MPEP § 1207.03, Sec. I (relating to new grounds of rejection), and request that this argument be withdrawn (Reply Br. 4; 2d Reply Br. 50).

Analysis

Although Appellants argue only claim 1, and state that claim 17 recites elements similar to claim 1 (Br. 12), there is a distinction between independent claims 1 and 17 that must be addressed. Claim 17 recites

"wherein the apparatus is configured such that the application model *can be controlled* using the first user interface and the second user interface at about a same time" (emphasis added); i.e., it recites an apparatus "capable of" being controlled using two interfaces at about a same time. Claim 1 recites "*controlling* the application model using the first user interface and the second user interface at about a same time" (emphasis added); i.e., it is a method step of operating a machine that requires that the application model is actually controlled by two interfaces at about the same time, not just that application model is capable of being controlled. The examples in the Specification of control using two interfaces at about the same time are a scanner operator at a main operator console (first user interface at the first location) and a physician at a remote location (second user interface at a second location) sharing the graphical prescription tool (Spec. 11, ll. 17-27) and, perhaps more clearly, the situation where the scanner operator sets up a real-time scan and then permits the physician at a remote reading room to control the scan session (Spec. 11, l. 28 to Spec. 12, l. 9). The Specification states that "[a]pplication model 72 translates user interface commands into actions and calculations, and also receives results of a given scan or scanning session for presentation" (Spec. 9, ll. 1-3), so we interpret "controlling the application model" in claim 1 to mean translating user interface commands into actions and calculations and not just receiving results of a scan for presentation.

Wood describes that an operator controls the ultrasound system through the control panel 20 and the system display 26 (first user interface)

and a remote user controls the ultrasound system by a display at a remote terminal shown in Figure 10 (second user interface). Clearly, there must be an operator present any time there is a remote user and both have access to the imaging control. Thus, the apparatus in Wood is capable of being controlled by either interface at about the same time as recited in apparatus claim 17 because each interface provides independent control. Accordingly, we find that Wood teaches "wherein the apparatus is configured such that the application model can be controlled using the first user interface and the second user interface at about a same time." Appellants do not provide any specific arguments why claim 17 is not met.

While the ultrasound system in Wood is capable of being controlled by the operator and the remote user at about the same time, Wood does not expressly describe how the operator and the remote user operate the apparatus. Nevertheless, since an operator is always present in Wood, and since "at about the same time" is a broad limitation requiring only that the operator and remote user control the application model sometime during a scanning session, Wood reasonably implies that the operator and remote user control the imaging system at about the same time. Wood describes that "[d]ifficult diagnostic cases can be directed to the most appropriate specialist for that case type on a moment's notice" (col. 12, ll. 3-5), indicating that an operator who has been controlling the system can let a remote specialist control the system at about a same time. It seems that the operator turning on the imaging system, even if the system is thereafter controlled by the remote user, would satisfy the controlling at about a same time limitation.

The Examiner finds that "at about the same time" means continuous monitoring and updating commands and results as rapidly as possible, and because Wood discloses providing physicians and operators updates in real time, "Wood discloses that the interfaces may control the application in 'at about the same time'" (Sub. Ans. 10). Appellants' argument that this is an impermissible new argument is not considered; whether the argument is new is a petitionable matter. "Controlling the application model" in claim 1 does not say what is controlled, i.e., that control is limited to adjusting imaging parameters, or that it is limited to controlling imaging. Therefore, controlling the application model can include controlling the report system in the imaging system in Wood. Wood's statement "that a physician can monitor the progress of an ultrasonographer operating the ultrasound system, retrieving images for diagnosis and patient reports from the ultrasound system for one patient while the ultrasonographer is in the process of conducting a diagnostic examination of another patient" (col. 12, ll. 24-29) indicates that both the physician and ultrasonographer control the ultrasound system at about a same time.

Appellants argue that Wood's statement that "a physician can perform an ultrasound exam from distances of thousands of miles from the patient, needing only a pair of hands at the patient's location to hold and manipulate the ultrasound probe" (col. 11, ll. 50-53) "suggests that the purpose of the person in the vicinity of the ultrasound system is to control the probe and not to control the system parameters" (Br. 12). We disagree. This portion of Wood does not say what the operator does before the physician performs the

exam. An operator is always required, and it is implied that the scanner operator would set up a real-time scan and then permit the remotely-located physician to control the scan session. While the rejection would perhaps be a safer fit under § 103(a) if this was the only teaching of Wood, i.e., that it would have been obvious use of the equipment in Wood for an operator and a remote user to both control the scanning system during a session, for the reasons stated, we find that Wood reasonably teaches "controlling the application model using the first user interface and the second user interface at about a same time" as recited in claim 1.

Conclusion

Wood teaches "wherein the apparatus is configured such that the application model can be controlled using the first user interface and the second user interface at about a same time" as recited in claim 17. The rejection of claim 17 is affirmed. Appellants do not argue the separate patentability of claims 18-26, 29, 30, and 60-65 and, therefore, the § 102(b) and § 103(a) rejections of these claims are affirmed.

Wood teaches "controlling the application model using the first user interface and the second user interface at about a same time" as recited in claim 1. The rejection of claim 1 is affirmed. Appellants do not argue the separate patentability of claims 2-4, 7-11, 15, and 16 and, therefore, the § 102(b) and § 103(a) rejections of these claims are affirmed.

Group 2 - claims 46-49 and 53-58[4]

The issue argued by Appellants and the Examiner is whether Wood teaches "generating an interface update in response to the command to the imaging system [from at least one of the first user interface and the second user interface], the interface update including data representative of the image; and providing the interface update to the first user interface and the second user interface" as recited in claim 46. However, we note that claim 46 is a product-by-process claim, i.e., an image generated by a series of process steps. During *ex parte* prosecution, "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself." *In re Thorpe*, 777 F.2d 695, 697 (Fed. Cir. 1985). *See Atlantic Thermoplastics Co., Inc. v. Faytex Corp.*, 970 F.2d 834, 846 (Fed. Cir. 1992) (noting difference in treatment of product-by-process claims between *ex parte* administrative proceedings and during litigation). "To the extent that the process limitations distinguish the

[4] Claim 46 is directed to an "image." An image is not a tangible object and does not fall within any of the statutory categories of 35 U.S.C. § 101. *See In re Nuijten*, 500 F.3d 1346, 1354 (Fed. Cir. 2007) ("If a claim covers material not found in any of the four statutory categories, that claim falls outside the plainly expressed scope of § 101 even if the subject matter is otherwise new and useful."). "Manufactures" are tangible articles or commodities. *Id.* at 1356. Thus, a "signal" cannot be patentable subject matter because it is not within any of the four categories. *Id.* at 1357. Similarly, a "paradigm" does not fit within any of the four categories. *In re Ferguson*, 558 F.3d 1359, 1366 (Fed. Cir. 2009). Nevertheless, because we affirm the rejection of claim 46 on prior art, we refrain from entering a new ground of rejection.

products over the prior art, they must be given the same consideration as traditional product characteristics." *In re Hallman*, 655 F.2d 212, 215 (CCPA 1981).

The issue is whether Wood teaches an "image." The process steps of making the image do not define a different image structure. Wood clearly teaches an image as shown in Figure 10. Accordingly, the rejection of claims 46-49 and 53-58 is affirmed.

Group 3 - claims 31, 32, 34-38, 41-43, and 45

Issue

Does Wood teach or suggest to a person of ordinary skill in the art the limitation of "means for updating located at the first location . . . configured to automatically send interface updates to refresh the second means for interfacing" as recited in claim 31?

Contentions

The Examiner concludes that it would have been obvious to provide a continuous or automatic updating functionality since Wood "discloses CGI programs capable of executing tasks in response to input arguments and performing system diagnostics" (Final Rej. 5).

Appellants argue that Wood does not teach a means for updating located at a first location that automatically sends interface updates to refresh means used for interfacing located at a second location. "Rather, it appears that Wood teaches that a remote user of the system of Wood et al needs to specifically request that the system be updated for an update to be

sent. Col. 11, lines 43-49." Br. 8. It is argued that the CGI programs do not provide motivation to form a system as claimed in claim 31 (Br. 9).

The Examiner finds that Wood teaches "a physician can monitor the progress of an ultrasonographer operating the ultrasound system" (col. 12, ll. 24-25), which "suggests the necessity of a continuous or automatic updating functionality" (Sub. Ans. 13) and concludes that "[m]odifying Wood such that the updates would be automatic is clearly desirable to one of ordinary skill in the art; otherwise the physician would have to constantly press the update button in order to monitor the system" (*id.*).

Appellants reply that Wood actually teaches away from automatically updating because column 12, lines 20-30, describes a physician receiving reports for one patient while the ultrasonographer is conducting an examination of another patient, while Appellants' system includes separate interfaces configured to monitor one patient (Reply Br. 5).

The Examiner also states that automatic updates would have been obvious because it "would be clear to one of ordinary skill in the art, and anyone who has, for example, browsed sports scores on ESPN.com, the ability to receive automatic updates over the Internet is a well known feature of the art" (Sub. Ans. 13).

Appellants reply that new broadcasting is outside the scope of the prior art and the Examiner relies on impermissible hindsight (Reply Br. 5-6).

Analysis

The rejection here is based on obviousness. Wood states "that a physician can monitor the progress of an ultrasonographer operating the ultrasound system" (col. 12, ll. 24-25), indicating that the operator (ultrasonographer) and the physician at the remote interface are viewing the same scans. We agree with the Examiner that one of ordinary skill in the art would have been motivated to automatically send interface updates to refresh all of the interfaces so that the remote user does not have to constantly use the "Update" button and so the physician is always seeing what the operator sees. Appellants' argument that Wood teaches away because it describes a physician receiving reports while the ultrasonographer is examining another patient does not address the portion of Wood relied upon by the Examiner.

Conclusion

Wood would have suggested to a person of ordinary skill in the art the limitation of "means for updating located at the first location . . . configured to automatically send interface updates to refresh the second means for interfacing" as recited in claim 31. The rejection of claims 31, 32, 34-38, 41-43, and 45 is affirmed.

Group 4 - claims 5, 6, 33, 44, and 59

Issue

Does Wood teach or suggest to one of ordinary skill in the art automatically updating the first and the second user interfaces in response to a command made to the imaging system by one of the first and the second user interfaces or in response to at least one response returned from the imaging system?

Contentions

Appellants argue that Wood does not teach a system that sends data to a second user interface to update the second user interface based on a change made by a first user interface, and vice versa, as recited in claim 59. "Rather, Wood only appears to update a user interface if the user specifically requests that the interface be updated. See Col. 8, lines 47-51 and Col. 11, lines 35-49." Br. 7.

Appellants argue that automatically updating the first interface based on at least some changes made by the second interface and vice versa "is not necessary for a remote control system where only a single user is in control of the system (as in the case of Wood et al)" (Br. 7).

The Examiner finds that Wood describes a physician located remote from the ultrasound system and an operator located at the ultrasound system, who communicate over the Internet, where the physician can provide instruction to the operator on site:

> Therefore, it seems obvious to one of ordinary skill in the art that both the physician and the operator must share the same view of

> the imaging system in order for the Wood's invention to be properly carried out. That is, while Wood does not expressly that updates are automatically sent between each of the users, the automatic updating functionality between the physician and the operator seems inherent and necessary for the physician and operator to work together; the physician should be able to see what the operator sees and the operator should see what the physician sees. One of ordinary skill in the art would realize that an automatic updating means between the interfaces is thus inherent to the system.

Sub. Ans. 12.

Analysis

Inherency requires that something must necessarily be present. The updating in Wood may be done only in response to the "Update" button so updating is not inherent. Nevertheless, while the Examiner refers to automatic updating as being "inherent," the rejection is based on obviousness, which provides more leeway for discussion.

For the reasons stated with respect to claim 31, we conclude that it would have been obvious to update all interfaces automatically in response to a change to the application model from one of the interfaces.

Conclusion

Wood would have suggested to one of ordinary skill in the art automatically updating the first and the second user interfaces in response to a command made to the imaging system by one of the first and the second user interfaces or in response to at least one response returned from the imaging system. The rejection of claims 5, 6, 33, 44, and 59 is affirmed.

Group 5 - claims 12-14, 27, 28, 39, 40, and 50-52

Issue

Would it have been obvious to a person of ordinary skill in the art to locate the first and second locations proximate to each other?

Contentions

Appellants argue that Wood does not teach providing a first user interface at a first location and a second user interface at a second location "wherein the first location and the second location are proximate to each other" as recited in claim 50 (dependent on claim 46). Claims 12, 27, and 39 provide a similar limitation.

The Examiner reasons that making the second location integral with the first location would have been an obvious matter of choice (Sub. Ans. 7).

Appellants argue that an obviousness rejection must provide some objective teaching in the prior art or in the knowledge generally available to one of ordinary skill in the art (Br. 12). It is argued that Wood does not suggest that two interfaces would be created proximately to one another (*id.* at 13). It is argued that since the entire point of Wood is to create remote controls for the imaging device, if the physician were in proximity to the control panel there would be no need to remotely control the system (*id.*).

The Examiner finds that Wood discloses that the user interfaces can be placed anywhere on the globe and it would have been obvious to places the user interfaces in locations proximate to each other because this would be consistent with Wood (Sub. Ans. 15).

Analysis

The Examiner's reasoning about locating two user interfaces at the same location because Wood does not impose any restrictions on the locations is a little weak. A stronger reason is that the limitation that "the first location and the second location are proximate to each other" is broad and does not say how close "proximate" is; e.g., a physician's user interface at his or her office at a hospital and an operator's user interface also in the same hospital could be considered "proximate" to each other, at least compared to locations across town or in different cites. Such locations are within the remote teachings of Wood. The Specification also describes in the Background of the Invention that it was known to have a scanner side operator console in the same room as the imaging system and a main operator console "located proximate to the imaging system but preferably in an adjacent room" (Spec. 1, l. 10). Accordingly, it would have been obvious to locate two user interfaces at locations proximate to each other because this was known in the art.

Conclusion

It would have been obvious to a person of ordinary skill in the art to locate the first and second locations proximate to each other. The rejection of claims 12-14, 27, 28, 39, and 40 is affirmed.

Group 6 - claims 66-76 (claims 67 and 69 are separately argued)

Appellants argue the separate patentability of claims 66, 67, and 69.

Claim 66

Issue

Does Wood teach "wherein the application model is configured such that it may be collaboratively controlled by the first user interface and the second user interface" as recited in claim 66?

Contentions

Appellants argue "Wood et al does not disclose an application model that is collaboratively controllable by a first user interface and a second user interface. Rather, a single user appears to control the system disclosed in Wood. See e.g., Col. 11, lines 50-53." Br. 9.

Appellants argue that Wood provides no motivation or suggestion to create a system that can be collaboratively controlled and one of ordinary skill in the art would not have been motivated by the purpose of Wood to implement the collaborative control (Br. 10).

The Examiner interprets "collaboratively controlled" as an operator and a physician at a remote location working together and sharing information (Sub. Ans. 14). The Examiner finds that Wood teaches "collaborative control" because Wood discloses a system allowing the physician to provide instruction to the operator on site (*id.*).

Analysis

We do not agree with the Examiner that the operator and physician communicating with each other constitutes "collaborative control" of the application mode. Nevertheless, we find that the system in Wood may be collaboratively controlled because any interface is capable of controlling the imaging system. The fact that the system may be controlled at one time primarily by an operator (such as when the physician is watching the progress of the operator, col. 12, ll. 24-25) or primarily by a physician at a remote location (col. 11, ll. 50-54), does not suggest that it cannot be controlled by both interfaces at more or less the same time. We find that Wood's system may be collaboratively controlled.

Conclusion

Wood teaches "wherein the application model is configured such that it may be collaboratively controlled by the first user interface and the second user interface" as recited in claim 66. The rejection of claim 66 is affirmed. Dependent claims 68 and 70-76 are not separately argued and, accordingly, the rejection of these claims is affirmed.

Claim 67

Issue

Would Wood have taught or suggested to a person of ordinary skill in the art that if a change is made to the application model using one interface, data should be automatically sent to the other interface?

Contentions

Appellants argued that Wood does not teach that collaborative control includes automatically updating the interface not making the change when the interface used to make the change makes the change, nor would it be needed to implement the remote control system of Wood (Br. 10). It is argued that in "Wood it appears sufficient that only the remote user control the imaging system, thus providing no reason to update the local interface -- particularly not automatically as claimed" (*id.*).

The Examiner relies on the reasons stated for claim 31.

Analysis

For the reasons stated with respect to claim 31, we conclude that it would have been obvious to one skilled in the art to update all interfaces automatically in response to a change to the application model.

Conclusion

Wood would have suggested to a person of ordinary skill in the art that if a change is made to the application model using one interface, data should be automatically sent to the other interface. The rejection of claim 67 is affirmed.

Claim 69

Issue

Does Wood teach or suggest to a person of ordinary skill in the art that first and second user interface are located remote from the application model?

Contentions

Appellants argued "[n]either the general nature and skill in the art nor Wood provides a motivation to include the ability for two people to collaboratively control the system remote from the application model using two separate interfaces. Instead, at best, Wood et al appears to teach a single remote user. See, e.g., Col. 12, lines 8-29; and Col. 11, lines 56-59." Br. 10.

The Examiner finds that Wood discloses multiple physicians are able to remotely access the imaging system at column 12, line 63, to column 13, line 5 (Sub. Ans. 14).

Analysis

The portion of Wood referred to by the Examiner indicates that reports are available from a local server on a local network even when the ultrasound system is not in operation. While this teaches more than one remote user, it does not account for the language in claim 66 that the interfaces must collaboratively control the application model.

One of ordinary skill in the art would have had sufficient skill to recognize that the system can be controlled by more than one remote user. Users access the imaging system through a home Web page (Fig. 4) on an

HTTP server 30 (Fig. 2). Although Wood describes only one remote user, this is only for purposes of illustration. Nothing precludes more than one remote user from accessing the imaging system or suggests that the system is limited to one remote user.

Conclusion

Wood would have suggested to a person of ordinary skill in the art that first and second user interface can be located remote from the application model. The rejection of claim 69 is affirmed.

CONCLUSION

The rejections of claims 1-76 are affirmed.

Requests for extensions of time are governed by 37 C.F.R. § 1.136(b). *See* 37 C.F.R. § 41.50(f).

AFFIRMED

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